

## **ARB TECHNICAL SYSTEMS AUDIT JUNE - AUGUST 2007**

### **BACKGROUND**

The ARB is the Primary Quality Assurance Organization (PQAO) responsible for ensuring that the air pollutant data collected by the ARB and 20 local Districts meet EPA QA requirements. A PQAO is a monitoring organization that is responsible for a set of stations for which data quality assessments can be pooled. Each criteria pollutant sampler/monitor at a monitoring station in the SLAMS and SPM networks must be associated with one, and only one, primary quality assurance organization.

The Regions are required to conduct Technical Systems Audits (TSAs) of all PQAOs every three years. We have no record of having ever performed a TSA of the ARB. During June - August, 2007 we performed the first TSA of the ARB PQAO.

This TSA reviewed numerous aspects of the ARB and its PQAO districts' monitoring program, including network management, field operations, laboratory operations, data management, and quality assurance. In addition to the ARB, we evaluated the air monitoring programs of three of the 20 districts in the PQAO, San Joaquin Valley APCD, Great Basin Unified APCD and Northern Sierra AQMD.

### **MOST SIGNIFICANT FINDINGS**

- The ARB QA program does not meet EPA QA requirements regarding Primary Quality Assurance Organizations.
- The ARB conducts monitoring using Federal grant dollars without adequate QA procedures in place.
- The ARB does not ensure that Districts under its QA oversight are implementing consistent QA controls for the collection and submittal of data to EPA.

### **RAMIFICATIONS**

#### **Validity of Data**

Generally, criteria pollutant instrument operators perform the required QC and maintenance checks so the data being collected are probably valid (for the most part). However, the overall QA program is not consistent from District to District or to the ARB, especially on data review and verification. The ARB has allowed significant program drift to take place over the years. EPA Region 9 is also culpable in that we should have performed an audit of their program many years ago.

### Consistency of Data

EPA currently pools all of the data from the ARB and its PQA districts under the assumption that they all collect data in a consistent fashion. Our findings have shown that the data is not being collected consistently. Unless the ARB ensures that all district operations match their own we should not be pooling this data. An example is the SJVAPCD monitoring network. In effect there are two separate monitoring networks in the SJV, ARB's and the District's. While the District refers to some ARB SOPs in its operations for the most part they operate their own network. The problem is that the SJVAPCD has no real QA program.

### Defensibility of Data

Looking back, the lack of QA oversight by the ARB and EPA makes defensibility of the data, if challenged, that much more difficult. Looking forward, because the QA procedures implemented by the ARB and Districts are not adequately documented and are not consistent from agency to agency, the likelihood increases that we might have to invalidate large chunks of data if a problem in the system occurs and is not corrected quickly.

### Grant Obligations

Federal regulations require that entities that accept federal grant dollars for the purposes of environmental data collection must have approved QA plans/programs in place.

### Resource Impacts

Without adequate State oversight, EPA region 9 will have to take a much more hands on role with local district monitoring program. We currently have 11 official PQAOs to oversee (ARB, South Coast, Bay Area, San Diego, ADEQ, Maricopa, Pima, Hawaii, NDEP, Washoe and Clark). Having to provide the same oversight for 20 additional CA local districts would have a significant impact on Region 9's workload.

### **ARB Response to Draft Report**

We shared a draft of the report's major findings with Jeff Cook, Manager of the Quality Management Branch (QMB) at ARB. His reaction was generally one of cooperation. He acknowledged the major findings as accurate and has informally committed ARB to working closer with the local Districts. Jeff provided us with a list of suggested corrective actions that we have incorporated into the recommendations in the final version of the report.

ARB has not yet seen the detailed findings of our report, though the majority of the program specific findings relate to ARB's oversight of District programs, which was discussed more broadly in the Major Finding section we did share with them.

There are still some areas where we need to come to agreement. Chief among them are the implementation of special projects and whether data collection activities in those instances require compliance with EPA QA regulations. QMB made it clear during our audit that they have limited QA role in monitoring projects initiated by other ARB Divisions. They have argued that these projects do not use Federal funds so are not subject to our QA requirements. Our review of ARB grants shows that we do support monitoring activities for special projects. Resolution of this issue will involve more communication between the EPA grants, monitoring, and QA offices and sending a clear message to the ARB during the grant application process that QA plans need to be submitted and approved. These plans should make it clear which entity in the ARB is responsible for special project QA activities.